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JACQUELINE MCBRIDE/NEWSLINE

Director Michael Anastasio announces he will lead the UC-Bechtel bid to manage LANL.

Anastasio heads UC team

The University of California and Bechtel National have named Laboratory Director Michael Anastasio as the team leader in the competition preparations for the management of Los Alamos National Laboratory. UC officials made the announcement Tuesday.

Anastasio, a nuclear physicist who has

led the Laboratory since 2002, has more than 25 years of experience in national security and nuclear weapons. Anastasio will lead the UC, Bechtel, BWX Technologies Inc. (BWXT) and Washington Group International (WGI) teams through the

See ANASTASIO, page 3

Final request for proposal to manage LANL issued

The Department of Energy's National Nuclear Security Administration has issued a final Request for Proposals (RFP) for the competitive selection of a management and operating contractor for Los Alamos National Laboratory.

In April 2003, former Secretary of Energy Spencer Abraham announced that DOE would compete the LANL contract. NNSA issued a draft RFP in December

See RFP, page 3

Science Day 2005 kicks off special Laboratory events celebrating Year of Physics

By Linda Lucchetti

NEWSLINE STAFF WRITER

On Monday, May 23, prominent guest speakers and scientists from across the country and around the Lab will converge on the Bldg. 123 auditorium and a tent erected in the West Cafeteria parking lot for "Science Day 2005" — the official start to "Science Week" and the Lab's "World Year of Physics" celebration. Here, scientists will gather to explain their research, and its connection to the seminal contributions Einstein made to physics 100 years ago.

Distinguished speakers will welcome guests and provide an overview. Jerald Paul, principal deputy administrator for the National Nuclear Security Administration will discuss, "The Role of Science in NNSA." M.R.C. Greenwood, provost and UC senior vice president of Academic Affairs, will speak on "The University of California Perspective," and Robin Staffin, associate director in the Department of Energy Office of Science

See SCIENCE DAY, page 8

Local leaders to visit Lab

Community leaders from the Tri- and Central valleys will attend a celebration of the "World Year of Physics" at the Laboratory Tuesday, May 24.

More than 170 community leaders from

See COMMUNITY, page 8



Supernovae may hold key to mystery of universal acceleration

By Charles Osolin

NEWSLINE STAFF WRITER

Albert Einstein reportedly called it the "biggest blunder of my life" - the notion that the universe contains a density and pressure, which he dubbed the "cosmological constant," that counteracts gravity and keeps the stars and planets from smashing together.

Einstein abandoned his theory as

unnecessary and scientifically inelegant after learning that the universe is expanding, apparently as a result of the primeval explosion that created space and time known as the Big Bang. But the recent revelation that the cosmos is not only expanding, but expanding at an accelerating rate, has revived Einstein's theory and sparked a lively cosmological debate about the nature of the mysterious anti-gravity force called dark energy that makes up about 70 percent of the known

universe.

A key element in the debate - and a possible clue to the ultimate fate of the universe — centers on the question of

See DDLS, page 7

Optics for the proposed Supernova Acceleration Probe (SNAP) orbital telescope.

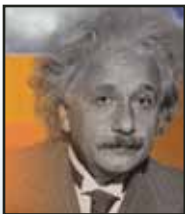


**Celebrating
Asian Pacific
American Heritage**

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Town hall meeting — Page



**Week of science
focuses on
Lab physics
— Pages 4,5**



LAB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 4

Friday
20

The Aurora project's Missions and Sponsors strategic planning team will host a **town hall/brown bag lunch** today from noon to 1 p.m. in the Bldg. 155 auditorium to share ideas and gather input from employees. Employees are encouraged to attend the meetings.

For more information on the Aurora project, see page 3.

Tuesday
24

To celebrate **Asian Pacific American Heritage Month**, author Rosemary Gong of San Francisco will discuss her book, "Good Luck Life — The Essential Guide to Chinese American Celebrations and Culture" today, from 11:30 a.m.-1 p.m. in the Bldg. 155 auditorium.

"Good Luck Life" is packed with practical information, historical facts and legends and is a culmination of Gong's efforts to acquaint herself with her cultural heritage after practicing and observing Chinese celebrations while growing up Chinese in America.

Prior to Gong's talk, the Asian Pacific American Council (APAC) scholarship awards will be presented. The presentation is sponsored by the Lab's Safety and Environmental Protection Directorate and APAC.

Thursday
26

In celebration of the "World Year of Physics 2005," LLNL physicist and internationally renowned scientist Simon Labov will present a talk on the importance of physics — in the work at the Lab and in all aspects of life, at the Livermore Chamber of Commerce Luncheon, today from 11:30 a.m.-1 p.m. at the Martinelli Conference and Event Center, 3585 Greenville Road. Employees are welcome to attend. Tickets are \$35 and include lunch. To make a reservation, call the chamber, 447-1606.

...

Up
&
Coming

LLNL's **Administrative Workshop** will be held June 7 at the Martinelli Event Center in Livermore.

The Biosciences and Nonproliferation, Arms Control, & International Security (NAI) directorates are co-sponsoring the annual event for non-exempt administration support. This year's theme is "Define and Embrace Your Power." The goal of the workshop is to improve communications between directorates, provide information about the Lab's mission and programs, as well as highlight the important role of nonexempt administrative support in the Lab's operations. Call Charlene Morris for more information, 3-9483.

APAC festival



JACQUELINE MCBRIDE/NEWSLINE

A festival featuring ethnic food and entertainment was held at the Lab Thursday in celebration of Asian Pacific American Heritage Month. Cultural exhibits and entertainment included performances by the San Jose Taiko Japanese Drums, above, Korean Dance choreographed by Suk Wung Choi (page 1 bottom) and Hawaiian dancing by the Lab's Floralei Eckert and her dance students.



Lab, DOE, UC endorse proposed changes from 300 series study

Proposed changes from the 300 Series Study have been endorsed by Lab management, the Department of Energy and the University of California. The changes will become effective May 31.

Note that 300 Series Study materials can be accessed via the IPPP Website,

<http://www-r.llnl.gov/IPPP/>.

Employees in the 300 series who are affected by a change in classification will receive a memo from their supervisor within the next week. Employees in the 300 series whose job classifications are unaffected will not receive notification.

IT'S ELECTRICAL SAFETY MONTH

Think Electrical Safety

Anticipate potential problems and hazards when working with electricity.

Plan and analyze for safety for each step of any electrical work.

Inspect electrical equipment to make certain it is in good condition, and remove damaged equipment from service immediately.

For more tips on staying safe, review Electrical Safety (Document 16.1) in the ES&H Manual.

Newsline

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NEWS OF NOTE



Aurora Mission and Sponsors town hall meeting today

The Aurora strategic team town hall meetings are off and running. To date, three of the five teams — Workforce and Work Environment, Partnerships and Relationships and Operations and Infrastructure — have met with employees to receive input on topics that should be considered when the team members make their final decisions on initiatives the Lab should undertake for the future.

The Aurora project is designed to develop strategic initiatives that will effectively position the Laboratory for its new 2025 vision: a multidisciplinary science and technology laboratory dedicated to national security in the global context. The project was named after Aurora, the Roman goddess of the dawn.

The Aurora project has been divided into five strategic planning areas: Missions and Sponsors; Science and Technology; Operations and Infrastructure; Workforce and Work Environment and Partnerships and Relationships. Approximately 100 employees from across the Laboratory are serving as team members. In addition to the town hall meetings, employees may submit ideas to the teams or associate directors via the MyLLNL por-



tal.

Workforce and Work Environment team members have discussed foreign national issues, how to bring in the best and the brightest employees, succession planning, a diverse workforce and rules and regulations that often serve as impediments to science.

The Partnerships and Relationships team has discussed a broader base of partners and relationships for the Laboratory to accomplish its missions in the future, positioning itself today to meet that goal, and identified a number of actions that will help the Laboratory reach this goal.

The Operations and Infrastructure team has discussed safety, security, environmental cleanup, modernizing the campus and infrastructure, quality operations and flexible business systems.

All comments gathered at the town hall meetings and from the Aurora Website will be considered.

The Aurora Missions and Sponsors strategic planning team will host a town hall/brown bag lunch meeting today (May 20) from noon to 1 p.m. in the Bldg. 155 auditorium to share ideas and gather input from employees. Team members have discussed how to evolve the stockpile stewardship mission, how to continue to expand the growing national security mission and solidify the sponsor base, and how a “soft path” to security might evolve into a broader national security mission including energy and water resources, health and environmental stewardship. Employees are encouraged to attend the town hall to comment on these issues or offer other points for the team to consider.

The Science and Technology strategy team will hold the final town hall meeting, Thursday, May 26, noon-1 p.m., in the Bldg. 123 auditorium.

ANASTASIO

Continued from page 1

upcoming Department of Energy (DOE) competition for management and operations of LANL.

The final decision regarding UC's participation in the competition is a decision that will be made by the UC Board of Regents — a decision that could come as early as next week. The request for proposal was issued by DOE Thursday.

“In his distinguished career at the Livermore Laboratory, including the last three years as director, Mike has shown a true understanding of the central role of science at the UC-managed national laboratories and has demonstrated, time and again, the depth of knowledge and expertise required to provide the best possible leadership for this competition,” UC President Robert Dynes said. “His familiarity with Los Alamos National Laboratory, the university and the missions of both institutions — as well as the National Nuclear Security Administration and the Department of Energy — make him an excellent choice for this key position.”

“Mike Anastasio is highly respected throughout the DOE complex and his experience at Livermore Laboratory, his commitment to science in the national interest and his fundamental understanding of the importance of science in the work at LANL makes him a natural selection for this position,” Bechtel National President Thomas Hash said. “Mike is the right leader to deliver science, business

and operations excellence to the laboratory.”

Anastasio will continue as LLNL director throughout the Los Alamos competition process. The strong existing management team at LLNL will assist Anastasio in the day-to-day operations of the Laboratory as he assumes these additional responsibilities.

“The UC-Bechtel team is very serious about this competition,” Anastasio said. “UC has a proven track record of strong scientific and technological expertise in support of national security.

“I am honored to have this opportunity and I look forward to leading our team.”

In late March, UC announced it also would partner with a consortium of New Mexico institutions to form the Advanced Studies Institute at LANL. These institutions include the University of New Mexico, New Mexico State University and New Mexico Institute for Mining and Technology. The agreement with these institutions solidifies the role of New Mexico universities as part of a bid to compete for the LANL contract.

In an all-hands meeting in the Lab's Bldg. 123 auditorium to discuss his new role, Anastasio said that should the UC-Bechtel proposal to manage Los Alamos be accepted by DOE, “I will become the next director of Los Alamos.”

He acknowledged “this has been a difficult decision for me and for my family.”

“But, I feel very strongly that it is in the best interest of the country to have two strong physics laboratories — Los Alamos and Livermore. I also believe strongly that it is in the best interest of the country that these two labs be managed by the same

contractor — managed in a way that promotes an integrated view of NNSA missions and programs, but that encourages the vigorous technical competition of ideas between these two laboratories. It's important to manage that relationship in an appropriate way.

“We need the kind of environment, culture and capabilities that these two labs, managed in the right way, can provide for the country,” he said. “For these reasons I've decided to take on this personal challenge to lead this team - the partnership UC has put together with Bechtel.”

Anastasio told employees he has already begun his new job “and you won't see much of me over the next few months. I'm giving 100 percent of my effort to make this competition a success and put forward a winning proposal.”

The contract to manage Los Alamos expires Sept. 30, 2005. In April 2003, then U.S. Secretary of Energy Spencer Abraham announced that DOE would compete the management and operations contract for Los Alamos; last December, DOE's National Nuclear Security Administration released the draft request for proposals (RFP).

The draft RFP was amended on Feb. 18 and April 5. The deadline for submission of bids is 60 days after the release of the final RFP. A source evaluation board made up of DOE technical and business experts will review the proposals submitted and provide recommendations to the source selection official.

RFP

Continued from page 1

2004 and solicited comments from potential bidders, LANL employees and retirees, government officials and other members of the public. The final RFP, issued Thursday, includes revisions based on the comments submitted to NNSA.

The University of California and Bechtel announced earlier this week that Lab Director Michael Anastasio would lead the team in the competition preparations for management of Los Alamos.

“The University of California and Bechtel led Los Alamos National Laboratory competition team, including BWX Technologies and Washington Group International, is reviewing the final request for proposals (RFP) that was released by the Department of

Energy. We are very pleased that the final RFP is out and that the competition is starting in earnest,” Anastasio said. “A decision on whether the University of California will take up the question of competition at its next regularly scheduled meeting of the Board of Regents is unknown at this time. A final decision regarding the University of California's participation in the competition is expected to be made soon.”

The final RFP includes provisions to reward excellence through performance incentive fees and term extensions. Bidders have 60 days to submit proposals, which are due by July 19. NNSA anticipates announcing an award by Dec. 1.

Proposals will be evaluated and assessed against the criteria contained in the RFP by a Source Evaluation Board (SEB), a panel of career NNSA officials chaired by Tyler Przybylek, NNSA's former general counsel.

The SEB will submit its evaluation to a source selection official, Thomas P. D'Agostino. D'Agostino, who is the acting deputy administrator for Defense Programs, will make the contract award decision.

The final RFP describes the criteria NNSA will use in selecting a future contractor. Key criteria include the potential contractor's management approach to conducting world-class science and technology; achieving excellence in laboratory operations and business operations; the naming of key personnel, including the proposed laboratory director; and past management performance.

The final RFP is publicly available at the Los Alamos National Laboratory (LANL) Management and Operating (M&O) Contract Competition Website: <http://www.doeal.gov/LANLContractRecompete/RFP.htm>

Physics eggperiments



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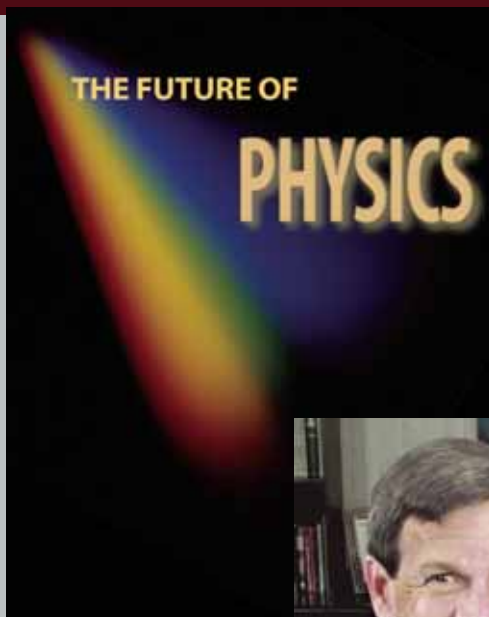
Albert Einstein (Lab employee Evan Rittmann) analyzes one of the entries of the Lab's "World Year of Physics" egg drop contest held this week for Livermore and Pleasanton middle-school students. The competition required students to combine their science sense and creativity to come up with a container that could protect a raw egg from breakage during a 25 ft. fall from LLNL's fire truck ladder. Shayna Dreher (inset right) of Livermore's Junction School won the contest and a \$100 prize. Her clever packaging idea, which saved the egg, included Jello, some bubble-wrap and styrofoam.



Everitt discusses

Physicist C.W. Francis Everitt of LLNL will deliver the 2005 Einstein Lecture: "Einstein's Legacy: The Originality," at 3:30 p.m. Thursday, May 26, in the Bldg. 123 auditorium. Everitt is professor of physics at the University of California, Berkeley. He is also a member of the Experimental Physics Laboratory. Origin of the universe. People may be in awe at a young Einstein's scientific papers in one year while working on the most difficult problems, that misses the most interesting point of his work. His work on Brownian motion, quantum mechanics, and relativity to an old problem. His work on special relativity, quantum mechanics, and relativity to an old problem. Most daring was the thing Boltzmann statistics to light quanta to explain the photoelectric effect.

LLNL'S WORLD



Researchers look boldly to the 'Future of Physics'

Employees will get a peek at up and coming physics work next week as a panel of eminent researchers will gather to speculate on the Future of Physics. Employees are invited to attend this unusual event at the Bldg. 123 auditorium on Wednesday, May 25, from 11:30 a.m. to 1 p.m. The Future of Physics panel will be led by former Lab Director Bruce Tarter. Panelists will include former Lab Director John Nuckolls, Deputy Director for Science and Technology Cherry L. Branscomb, Biosciences Associate Director Elbert Branscomb, Karl van Bibber, chief scientist in the Physics and Advanced Technologies Directorate, and Leslie Rosenberg, a physicist in the Physics and Advanced Technologies Directorate.

Each will also address a specific field of physics. Nuckolls will focus on fusion, Murray will focus on condensed matter, Branscomb will share his thoughts on biophysics, van Bibber will talk about energy physics and big accelerators, and Rosenberg will reflect on dark matter and dark energy.

The topics are some of the most important and stimulating in physics today and all are active areas of research at LLNL.

The discussion will be at a *Discover* magazine level, so that any reasonably technically literate person will come away enlightened and, hopefully, inspired.



Manya: A living history of Marie Curie



To commemorate the "World Year of Physics 2005," the Laboratory, will present "Manya: A Living History of Marie Curie," a performance by Susan Marie Frontczak, on Tuesday, May 24, from 2-3 p.m. in the Bldg. 123 auditorium. This one-woman drama exposes the struggles and triumphs of Madame Marie Curie, an academically impassioned, vehemently private, Polish scientist, mother and teacher. From the political oppression of her childhood to scientific realization and fame, to the tragedy that forced her into single motherhood, as well as further world prominence, "Manya" relates a compelling journey.

This program honors a preeminent woman of science: discoverer of radium and radioactivity, first European woman to earn a doctorate in the sciences, first woman to lecture at the Sorbonne and win two Nobel Prizes.

Audiences will relive the extraordinary collaboration between Curie and her husband and wife, Pierre and Marie, companion scientists who worked with the medical community to establish the first successful treatment for cancer.

Frontczak also will perform for the public on Monday, May 23, 7-9 p.m. at the Livermore High School Theater, 600 N. Livermore. The presentation is open to the public. Seating is on a first-come, first-served basis and admission is free. For further information, see the Website at <http://www.llnl.gov/pao/WYOP>.



CLASSIFIED ADS

See complete classified ad listings at
<https://www-ais.llnl.gov/newsline/ads/>

AUTOMOBILES

1995 - Mustang GT, 5-Speed, White, V-8, 59,800 miles, AC, Power Seats, Tinted Windows, Tilt Wheel, Detachable AM/FM Stereo, CD player, \$6,200. 925-518-3690

1994 - Jeep Grand Cherokee Laredo, 4X4, 4.0 I6, Tow Pkg., 2 inch suspension lift, posi rear end, CD changer, Great condition. 209-599-5931

1970 - MOPAR, Plymouth FuryIII Convertible. White/Blue, good condition.(318 Overheats) New Year1 black-top ready to install. Pics avail. \$5,500 obo. 209-839-1205

1995 - Acura Integra, low mileage, new tires, runs well. \$3500 obo 925-443-7020

1963 - Bel Air Station wagon. No motor or trans.Body is complet.Asking \$2,500 925-373-0480

2000 - Mazda 626 LX, very dependable, good cond, 4 cyl, AT, AC, CC, AM/FM/CD, power windows and locks, 108K miles, \$4600/OBO. 209-814-8976

1989 - Merker XR4TI- red, blk interior leather, a/c, P/W, P/L, turbo, 5-speed 120K miles, 2000.00 OBO 925-455-1098

1965 - CLASSIC Ford Thunderbird, 390 V8, AT/PS/PW/AC/swing away. 2nd owner, Full documents . \$4000 obo 925-449-1340

2000 - Volvo Cross Country, 7kK mi, loaded, excellent condition \$15,600. Call 925-454-1033

1998 - Ford Explorer LTD, AWD, V8, power everything, CD changer, sun/moon roof, memory seats, AC, roof rack & bike rack, leather, 125,000mi, \$8200 925-373-1757

1984 - Scircoco \$400.00/OBO New tires. Damaged left rear corner.The car still runs great. Low miles. It has a California salvage title. 510-783-9923

1991 - Honda Prelude SI, Great condition, new front tires, 5 sp, AC,CC, AM/FM Cassette, Alarm, Sunroof, \$2600 OBO. 925-980-5592

2002 - Mercedes Benz C230-Kompressor Coupe 22k with warranty, 4-cylinder, 2.3l supercharged panoramic-sunroof, Automatic, Yokohama ES100 tires \$17,500 510-653-1017

2002 - Ford Mustang, original owner, 100% synthetic oil from <10K miles, V-6, new Michelin tires, 5 speed, 44K miles, \$9,250 209-832-8072

1992 - Honda Accord EX. Looks and runs great. White with Blue interior. Good tires. 156k Miles, recent service. Asking \$2800 OBO. 925-245-1414

1989 - Plymouth Sundance. Only 87Kmi. Looks great, runs great! \$1500 925-606-4263

1988 - Mazda RX7 GLX w 4-speed manual trans, air. Well maintained, one owner, 168K original miles. All maintenance records available. \$1500 OBO. 925-735-3109

1997 - BMW 528i, very good condition, dark green, 101k miles. \$12,500 OBO 925-784-2071

AUTOMOBILE ACCESSORIES

Car Bras: 90-92 Acura Integra \$10, 02-04 Mercedes C230-coupe \$20, Nissan Axxess 1990 \$5 510-653-1017

4-MXV Michelin tires, 225/60/R16. Used less than 1000 miles. \$140 each New, asking \$70 each/\$280.00 for all/Make Offer. 925-426-0648

Custom made sheep skin seat covers, fits newer Volvo, color back, new condition \$100. Please call 925-454-1033

15 inch TIRES: Two 235/75/15 good tread, one mounted on 6 bolt rim \$25/both. Livermore. 925-447-7070

1984 Lance Camper, 9 1/2ft, \$2000, details and pictures 925-443-6786

BICYCLES

05 Trek Navigator 100 Men Comfort Bike 16.5. Used only a few times, asking \$230.00 925-449-6137

Powerlite Mini, race ready, great condition, loaded, extras. \$500. 925-846-5227

2003 specialized allez road/triathlon bike.54cm 700x23 shimano wheels, 9 speed shimano ultegra 925-997-4269

Get-A-Long Bicycle Trailer by Cycle Design (2 seater) \$200.00 Ray 510-796-3142

BOATS

Kayak, Dagger Vengeance, hardly used, beautiful, w/paddle. \$300. 925-846-5227

1996 Regal Deck boat 302 fuel injection, Volvo Penta outdrive, low hours, lots of extras. \$12,000 OBO. 925-754-5377

Sailboat 19 ft 6 in. Caledonia Yaul, Nissan 5 Hp motor and trailer included, always garaged \$3000.00 925-373-9684

CAMERAS

Minolta 7000 SLR/autofocus with 50mm lens, 28mm lens and 70-210mm lens. Flash, strap, filters, bag and extras \$300 obo 925-634-2701

ELECTRONIC EQUIPMENT

Upgrade your surround system - Bose Life Style 28, power subwoofer w/5 double cubes, built-in DVD & receiver and extras. \$750 obo. 209-551-4309

Mitsubishi 35inch TV console with walnut cabinet, picture-in-picture, cable-ready tuner, top-of-the-line unit, fantastic picture. \$200 415-543-3643

DVD player unopened (raffle) not progressive \$20; Complete computer 800+ mhz, RAID, 384mb ram, Geforce3, CD burner, 15in crt, Win98, hi-quality \$200 925-449-3165

HP COLOR printer, hardly used. 35.00. 510-537-7222

GIVEAWAY

Free beer bottles for homebrewer. Three cases, labels stripped. 925-443-6014

HOUSEHOLD

Brand new in box air purefier new Over \$300, yours for only \$75.00 925-447-4797

JVC TV 32 inch, 3 yr,\$200. Nice traditional bookcase, 6ft x 33inch wide, shelf on bottom with cupboard doors, \$80.00 925-449-1823

Solid Oak Cheval Mirror in natural finish. Elegant and in great condition. 64 inches tall. \$60.00 925-447-9647

Couch (love seat), beige/cream/tan fabric threads with some light wood trim along rounded corners \$30 925-449-3165

Oversized chair and love seat. White with embroidered pattern. Great Condition. Pictures available, \$150 OBO 925-964-0534

Leather couch and loveseat; chocolate, casual style; very good condition. \$100 for both/OBO. 925-447-4830

Oak bar stools. Three swivel stools in good condition. \$75. 925-606-0260

Garage Sale-Sat May 21, 9am-3pm,

2690 Crater Rd, Livermore. Clear-out of household, gardening and handy-man extras. 925-443-1229

Dining Table w 4 Chairs, solid oak, dark, 53in, fair \$50; Desk, solid oak, dark, 5ft x 3ft x 30in, 6 deep drawers, good \$50. 925-784-5850

Cherry computer desk w/ file cabinet, matching credenza with 4 drawer file cabinet and 4 door shelving unit. \$750 Beautiful,call for photos. 925-963-3521

Moving, MUST SELL, weed wacker,fridge,comp desk, lawn tools,dog igloos,generator, will be having yard sales 14790 Stratford Ave. Lahtrop. 209-983-8372

CARDBOARD BOXES, STURDY moving/storage: Medium,great for books/dishes/heavy things: 40 for \$50, Livermore 925-447-7070

LOST & FOUND

LOST - Expensive pair of Maui Jim Sunglasses, somewhere between central cafeteria and bldg. 490. \$\$ Reward for their safe return. 925-426-8156

MISCELLANEOUS

Buffy the Vampire Slayer DVDs. Season One. \$20. Great for Buffy or Angel fans, kids or kids at heart. Commentary extras, original inserts. Paid \$40. 925-634-1110

Wet suits. light weight 1/8 inch neoprene. Great for snorkling or skiing. Used once. Two womens size med. One mans size med. \$35 925-606-0260

Paul McCartney tickets 11/7/05 San Jose - Section 202 Row 14, seats 1-4, price \$102.00 each, Section 117, Row 20 seats 11 & 12, price \$148 each. 925-634-8173

Redwood picnic table for 6-8 people. Good condition. \$50.00. Canning jars, various sizes. \$10.00. 510-582-2938

4 GPM at 4000 PSI, 13 HP industrial grade pressure washer. Electric start, 13 HP Honda engine, almost new \$2,000 obo 925-449-4992

Student Microscope \$50 10X eyepiece, 4X/10X/40X objectives plus wooden case 510-653-1017

Evenflo stroller/car seat/carrier combo. Good cond. used about a year. \$20 209-365-0412

Powermatic shaper 1/2in arbor \$1,500. 10in radial arm saw \$150. 12in DeltaMilwaukee radial arm saw \$600. 5 ton press \$125. Ex.cond 925-454-9160

MOTORCYCLES

1993 - KX60, like new, stored for years, Sparky, green sticker, extras, gear. \$1,000 925-846-5227

2003 - Yamaha YZ85: Extras, Asking \$2000 Looks good, Runs great. Call 209-834-1374 Tracy,Ca. 209-834-1374

2000 - Sportster C883, lowered, Thunderheader pipes, windshield, Gun Fighter seat, custom paint. Excellent condition. (10,000 miles) \$6500 209-599-5994

1999 - Harley Davidson Sportster 1200 XL Custom 9,200 miles, \$6500 OBO 650-921-4690

MUSIC INSTRUMENTS

Yamaha Piano \$750 Compact & rare Spinert configuration Contemporary Mahogany Style Gloss Lacquer finish Metronome included 510-653-1017

PETS & SUPPLIES

Dog run/kennel. Large 12 foot long.

Chain link. Make offer. 925-606-0260

New Innotek Preimium Rechargeable In Ground Pet fencing system with 1000f (2 spools) of wire and surge suppressor. \$216. 925-785-4680

55 gallon aquarium with metal stand. Great condition. No leaks. \$125 Gravel and accessories also available. Make offer. 209-836-5764

Black cat - male, 8yrs old, neutered, declawed. FREE to good home. 209-499-2322

Free bird cage. Oak and mesh. Cage volume is about 3ftH by 3ftW by 1.5ftD. Pedistal with storage. Total height 5ft. 925-606-9575

Free to loving home! ~4.5 yr old black female cat. Spayed, declawed, no shots due until 3/06. Playful, sweet disposition. 925-449-5650

Purebred Boxer Pups, \$300-\$325, 3Female 1Male, Very cute 209-815-3882

English Saddle, 17 in. Wintec, great condition, barely used. \$200.00 OBO 209-482-3373

Consider saving lives by providing temporary foster care for homeless puppies and kittens. Please call if interested. Thank you 925-980-3035

RECREATION EQUIPMENT

SADDLE: Crosby Equilibrium, close-contact with all fittings, exc. condition, BO 925-634-2307

Health Rider. Good condition. Hardly used. \$20 925-606-0260

ONeill wet suit,knee length, Large and ski vest. \$40.00 please call after 2 p.m. 209-956-9015

Rowing machine, works great. \$5 209-365-0412

1999 Gulf Stream Sun Voyager diesel pusher, 36 ft, 35K miles, \$70,000 925-443-6786

RIDESHARING

Express your commute, call 2-RIDE for more information or visit <http://www-r.llnl.gov/tsmp>. Riverbank or Oakdale - Looking for Vanpool or Carpool space 1 rider M-F hours adjustable. Starting June 20th. 209-529-0431, ext. 2-8828

San Jose - Seeking carpool partner from San Jose, on AWS 9/80 408-268-7924, ext. 2-9107

Orinda - Lamorinda carpool seeks 4th driver/rider. Meets near Hghwy 24 and St. Stephens. Lab hours 8am-4:45pm. 925-253-0498, ext. 2-9823

SERVICES

INTERIOR, EXTERIOR PAINTING Low season rates, free estimates. Its a good time for painting before the hot weather. 510-537-7222

House Cleaner, dedicated/experienced, looking for homes in the Weston Ranch area. Call 209-234-2314

ClutterLess(CL) Self Help Group. Clutter stressing you out? Mondays 7-8:30 PM. Come: Pleasanton Presbyterian, Rm 7, 4300 Mirador Drive, or call 925-846-5060

Daycare in Dublin. Children ages 0-4. F/T only. Lunch & Snacks provided. Call 925-829-6711

SHARED HOUSING

Livermore - Room for rent w/ private bath. \$550 a month, utilities included. No pets. Female preferred. No Smoking inside. Available now. \$550 deposit. 925-339-5825

TRUCKS & TRAILERS

1995 - Ford truck F-150 xlt,automatic,A/C, cruise,bedliner, 302 v-8 Fuel injected, extra cab, excellent condition, \$5,600.00 925-784-1912

1992 - Tioga Arrow, Class C, 27 ft, Ford 460, Loaded, Excellent Condition, 48k miles, twin beds, new tires, \$16,000 925-447-8607

1996 - Ford Ranger XLT, extra cab, good running, bedliner, cassette. 5,300.00 OBO 510-537-7222

1990 - Alpenlite DL 27ft 5th wheel, generator, refrig., AC, solar, furnace, water heater, micro., awning, much more \$11,000 925-447-7175

2000 - Jeep Wrangler Sport,yellow,soft top,automatic,p/s,cruise,cd player,runs great, only 55,000 miles, asking \$9500 obo. 209-825-5489

2002 - Toyota Tacoma, prerunner, ext.cab, V6, auto, CD player. ONLY 19K miles \$16,800 obo. 209-483-5379

1999 - GMC Sierra, V6 4.3L, 2WD, AT, PS, 57K mi, all terrain tires, chrome rims, AM/FM/CD, original owner, well maint. 16-20 mpg. 925-449-0865

VACATION RENTALS

Cozy mountain cabin near Arnold. 4 bedr, 2 bath. Near hiking, fishing, boating. Lots of outdoor activities. Plan ahead for summer. 925-245-1114

Sooo cute beach cottage in Santa Cruz near boat harbor. 2 bedr, 2 bath. 4 blks from ocean, spa. Plan ahead for summer. 925-245-1114

MAUI - 1 year house exchange. Perfect opportunity to see what its like to live in paradise for longer than a short vacation. 925-449-4003

Gualala, CA (Mendocino Co) - Stunning whitewater ocean views, 2bd/2ba vacation home w/ deck, bbq & hottub. Walking distance to town w/ shops, restaurants & spa. \$511/weekend. 925-606-1845

WANTED

Would like to find some Youth size catcher gear in safe/usable condition for an aspiring catcher. 925-447-4797

Reliable car for new grad. Automatic. Prefer foreign 2 dr hatch or small wagon. Can pay up to \$1500. Leave msg. 510-209-1386

Starting a hobby and looking for old golf carts running or not call 209-835-5495

Stamp collector looking for postal stamp collections that you no longer want. 925-449-1294

Looking for a used gas/electric refrigerator for a motorhome. Will pay reasonable price. 209-835-1829

Car tow dolly in good condition. 408-241-2203

Wanted- Person to help with yard-work, painting, auto repair, odd jobs, weekends or evenings Livermore or Pleasanton 925-447-7070

Wanted: Motorcycle: FL250 whole or parts 209-832-2878

DDLS

Continued from page 1

whether the cosmic acceleration is constant, speeding up, or slowing down. One of the scientists who discovered universal acceleration, Saul Perlmutter of UC Berkeley and Lawrence Berkeley National Laboratory, believes the answer to that question may be found in the death throes of a variety of uniformly bright exploding stars called type 1a supernovae.

Perlmutter heads the international Supernova Cosmology Project, one of the two teams whose observations in the late 1990s led to the discovery of the accelerating universe. In a Director's Distinguished Lecturer Series talk last Tuesday, Perlmutter said more precise data from much more distant — and therefore much older — supernovae could reveal any telltale variations in the rate of acceleration over the history of the cosmos.

"You can use the brightness of the supernovae to tell you how far away they are, but you can also use the color and the spectral features of the supernova to tell you about how much the universe has expanded since the light left that supernova," Perlmutter said.

"As the universe expands, anything that's in the universe that's not bound, and that includes the wavelengths of light traveling to us, will stretch exactly proportionately with the universe," he said. "So it's a direct measurement of the total expansion history of the universe since the time that the light left that supernova."

A supernova occurs within a galaxy only once or twice every millennium, so Perlmutter's team developed techniques for looking at thousands of galaxies at a time and thus guaranteeing that several explosions would be found in the area of the sky under observa-

tion. The data from these techniques produced the startling conclusion, subsequently confirmed by other cosmological measurements, that the universe is expanding at an ever-increasing pace.

Obtaining data that will enable astronomers to study the fine details in the history of cosmic expansion, however — including data from supernovae whose light originated billions of light years away — will demand dramatic improvements in precision, Perlmutter said. "Reaching this level of precision forces us to deal with systematic uncertainties" that will require new techniques and technology, he said.

One way of looking at dark energy is to try to determine the value of its "equation of state" — the ratio of its pressure to its energy density — which is known as the "w parameter." If that value is constant, as Einstein initially believed, the universe could continue to expand forever. On the other hand, if the properties and density of dark energy change over time, a large variety of scenarios are possible: for example, gravity could take over, the current acceleration could be reversed, and the universe could collapse inward in a "big crunch." Or eventually the galaxies, stars, planets and matter itself could be torn apart in a catastrophic "big rip."

"The equation-of-state variable is something we can set out to measure using supernova data," Perlmutter said. "But if you allow 'w' to vary with time, we're faced with a very interesting challenge" in trying to identify time variations in the dark energy with a sufficient level of confidence in their accuracy.

"It's not just a statistical problem," Perlmutter said. "Now you're pushing all your measurements to the limits of the systematics. For any measurement that we're going to do that's going to have a bearing on dark energy, the real question is how well are we going to be able to control the systematics of the experiment."

While progress is being made in eliminating some of the uncertainties in the latest generation of ground-based telescopes, such as the effect of interstellar dust, at least for mid-distance supernova, Perlmutter said data distortions due to dust and other factors such as gravitational lensing and atmospheric blurring, absorption and scattering can only be constrained for the full range of celestial distances by "going above the atmosphere." Consequently, Perlmutter and his colleagues are pinning much of their hope for success on a proposed new satellite telescope called the Supernova/Acceleration Probe (SNAP).

The SNAP project would place an orbiting optical and near-infrared telescope in a metastable balance point between the gravitational fields of the Earth, moon and sun to measure thousands of supernovae of all ages, while adequately correcting for systematic uncertainties.

SNAP features a two-meter mirror — almost as big as the mirror in the Hubble Space Telescope — a half-billion-pixel imager, and a high-throughput spectrograph. Unlike the multi-purpose Hubble, Perlmutter said, SNAP is designed to do "one kind of project really really well," and will represent a "dramatic step forward in how much of the sky you can survey really quickly."

The project has won enthusiastic support from a variety of government agencies, Perlmutter said. This support has led to a funding competition for a NASA/DOE Joint Dark Energy Mission (JDEM). Perlmutter said he is hopeful that the competition will take place within the next year or so and that JDEM could begin as early as 2007, with a possible launch date early next decade.

"We get to live in a very interesting time in history," he said. "We're getting to explore a new domain, cosmology, for the first time with precise measurements. You always learn interesting things when you do that."

Technical Meeting Calendar

**Friday
20**
CENTER FOR APPLIED SCIENTIFIC COMPUTING (CASC) / INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH (ISCR)

"Point-Set Surfaces: An Update and Recent Work," by Claudio T. Silva,

University of Utah. 10 a.m., Bldg. 451, room 1025, White Room. For more information, see URL (<http://www.llnl.gov/casc/calendar.shtml>).

Property protection area. Foreign national temporary building access procedures apply. Contact: Valerio Pascucci (CASC), 3-9422, or Erica Dannenberg, 3-2167.

INSTITUTE FOR GEOPHYSICS AND PLANETARY PHYSICS

"Stellar Interferometry at Mid-IR Wavelengths — The Characteristics of Old Stars," by Charles Townes, UC Berkeley. Noon, Bldg. 219, room 163. Contact: Wil van Breugel, 2-7195, or Lisa Lopez, 3-0250.

DYNAMICS OF METALS SEMINAR

"Dislocation Nucleation at Surfaces," by Guanshui Xu, Department of Mechanical Engineering. 2 p.m., Bldg. 219, room 163. Property protection area. Foreign national temporary building access procedures apply. Contact: Robert Rudd, 2-4292, or Wendy Dossey, 3-5556.

AURORA - MISSIONS AND SPONSORS
BROWN BAG LUNCH/TOWN HALL MEETING

Noon-1 p.m., Bldg. 155 auditorium. Property protection area. Foreign national temporary building access procedures apply. Contact: Marsha White, 3-7697.

**Monday
23**
COMPUTATION/LC: MPI TOPICS COLLOQUIUM

"Programming for Optimal MPI Performance on LC's Linux / Quadrics Clusters," by Adam Moody, Computation / ICCD. 10

a.m., Bldg. 451, room 1025, White Room. For more information, see URL (http://www.llnl.gov/computing/mpl/news_events.html). Property protection area. Foreign national temporary building access procedures apply. Contact: Terry Jones, 3-9834, trj@llnl.gov.

CHEMISTRY AND MATERIALS SCIENCE/CHEMICAL BIOLOGY & NUCLEAR SCIENCE POST DOCTORAL APPLICANT SEMINAR

"Dynamics and Structure in Metallic Supercooled Liquids and Glasses Studied by NMR," by Lilong Li, University of North Carolina at Chapel Hill. 11 a.m., Bldg. 151, room 1209. Property protection area. Foreign national temporary building access procedures apply. Contact: Beverly Zumwalt, 2-7535, or Julie Herberg, 2-5900.

CHEMISTRY AND MATERIALS SCIENCE DIVISION BIOSECURITY & NANOSCIENCES LABORATORY

"Capabilities & Science of the Forensic Science Center," by Glenn Fox, Forensic Science Center. 2 p.m., Bldg. 151, room 1209, Stevenson Room. Foreign nationals temporary building access procedures apply. Contact: Ted Tarasow, 3-7241, or Katie Thomas, 2-7903.

**Tuesday
24**
RADIATION DETECTION CENTER

"High Resolution Gamma Ray Detectors for In Vivo Imaging," by Simon Cherry, UC Davis. 11 a.m., Bldg. 151, room 1209. For a list of upcoming and past RDC Seminars,

visit the RDC Seminar Website at <http://rdc.llnl.gov/seminars.html>. Property protection area. Foreign national temporary building access procedures apply. Contact: Ron Wurtz, 3-8504, or Christie Shannon, 3-6683.

PHYSICS & ADVANCED TECHNOLOGIES DIRECTORATE-WIDE SEMINAR

"Eternal Inflation," by Alan H. Guth and Victor F. Weisskopf, MIT. 1 p.m., Trailer 2128, room 1000. Common use facility. Foreign nationals may attend. Contact: Stephen Libby, 2-9785, libby1@llnl.gov, or Alan Wootton, 2-6533, wootton1@llnl.gov.

CENTER FOR APPLICATIONS DEVELOPMENT & SOFTWARE ENGINEERING (CADSE) / INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH (ISCR)

"Research on Software Reliability and Security," by Zhendong Su, UC Davis. 10 a.m., Bldg. 451, room 1025, White Room. For more information, see URL (<http://www.llnl.gov/casc/calendar.shtml>). Property protection area. Foreign national temporary building

access procedures apply. Contact: Tamara Dahlgren (CADSE), 3-2685, or Erica Dannenberg (ISCR), 3-2167.

**Wednesday
25**
PHYSICS & ADVANCED TECHNOLOGIES /N DIVISION

"Elastic and Inelastic Scatterings Microscopic Calculations and Application to FKK Preequilibrium Formalism," by Marc DuPuis,

CEA/Bruyeres-LeChatel, France. 10:30 a.m., Trailer 2128, room 1000. Property protection area. Foreign national temporary building access procedures apply. Contact: Erich Ormand, 2-8194.

PHYSICS & ADVANCED TECHNOLOGIES/V DIVISION

"Modeling Magma: Ab Initio Simulation of Silicate Liquids at High Pressure," by Lars Stixrude, University of Michigan, and visiting Miller professor, UC Berkeley. 9 a.m., Bldg. 219, room 163. Please note date and location change. Property protection area. Foreign national temporary building access procedures apply. Contact: Stefanie Landes, 2-3201.

**Thursday
26**
CHEMICAL BIOLOGY & NUCLEAR SCIENCE DIVISION/CHEMISTRY & MATERIALS SCIENCE DIRECTORATE

"Protein Inhibition Using Tailored Nanoparticle-Based Receptors," by

applicant Nicholas Fischer, University of Massachusetts, Amherst. 2 p.m., Bldg. 151, room 1209. Foreign nationals may attend if appropriate security plan is on file, which includes Bldg. 151. Contact: Jeffrey Tok, 3-1549, or Eryn Davis, 2-0475.

**Friday
27**
CENTER FOR APPLIED SCIENTIFIC COMPUTING (CASC) / INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH (ISCR)

"HPCToolkit: The Rice Performance Tools," by Robert Fowler, Rice

University. 10 a.m., Bldg. 451, room 1025, White Room. For more information, see URL (<http://www.llnl.gov/casc/calendar.shtml>). Property protection area. Foreign national temporary building access

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

SCIENCE DAY
Continued from page 1

will present “The Quantum Universe.”

“We’re delighted to welcome the National Nuclear Security Agency, the DOE Office of Science and the University of California in celebrating the World Year of Physics together,” said Cherry Murray, LLNL’s deputy director of Science and Technology.

Murray, who will provide the opening and closing remarks said, “The Laboratory has really embraced the World Year of Physics in a big way. This is going to be a great deal of fun.”

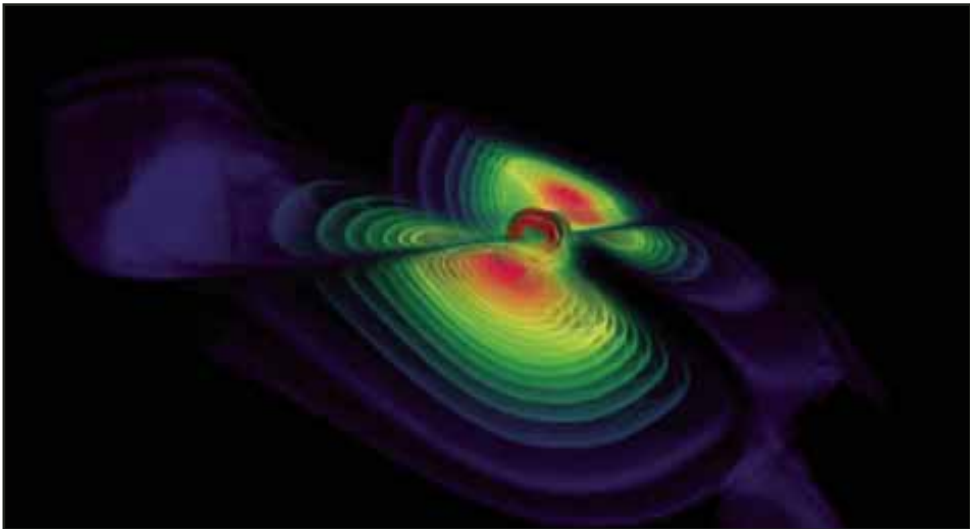
Four areas of physics will be highlighted in talks during the following sessions held in the Bldg. 123 auditorium. (For a complete schedule, including speakers’ biographies and abstracts, see the Science Day Website at <http://scienceday.llnl.gov/>)



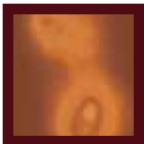
Light and Matter — “The three talks in this session span a wide range of topics involving the interaction of light and matter, which has been at the heart of many Laboratory programs since their inception.”

— *Bruce Tarter, chair*

The talks include: “Laser Based Study of Matter at Extremely High Energy Densities,” by Michael H. Key, LLNL; “Superconducting Flux Qubits: Quantum Coherence in a Macroscopic Circuit,” by John Clarke, UC, Berkeley; and “Novel Light Sources: From Synchrotron Radiation to X-ray Free-electron Lasers,” by Claudio Pellegrini, UCLA.



As part of the astrophysics session of Science Day, Barry Barish will discuss colliding black holes, as shown here.



Astrophysics — “The talks in this session address Einstein’s singular impact on our picture of the universe and the Laboratory’s special connection to astrophysics.”

— *William Goldstein, chair*

The talks include: “Einstein’s Legacy: General Relativity, Our Best Description of the Universe,” by Barry Barish, California Institute of Technology; “The Cosmos in a Speck of Dust,” by John P. Bradley, LLNL; “Finding Black Holes with the Nuclear Spectroscopic Telescope Array,” by William W. Craig, LLNL and Stanford University.



Theory and Simulations — “In this session, three exceptional researchers examine computational simulation as a tool for modeling and visualizing the physical principles described by Einstein.”

— *Dona Crawford, chair*

The talks include: “Einstein, Thermodynamics, and Life on Earth,” by Axel Kleidon, University of Maryland; “Bacterial Locomotion and Pattern Formation,” by George Oster, UC Berkeley; and “Using Optical Tweezers to Study Biological Motors,” by Steve Block, Stanford University.



A fifth topic, **nuclear physics**, will be included in the poster expo to take place in the World Year of Physics Celebration Pavilion (tent) in the West Cafeteria parking lot. More than 60 scientists

and engineers will be on hand to present posters, video displays and demonstrations of hardware and instrumentation that showcase their recent work. The Poster Expo will be open all day, from 8 a.m. -5 p.m. with exhibitors present from noon to 2 p.m.

Lab employees are encouraged to attend and seize the opportunity to hear and interact with a prestigious group of scientists and researchers.

COMMUNITY
Continued from page 1

throughout the region have registered for the annual Community Leader Day to receive updates on Laboratory programs, tour research facilities and, this year, mark the centenary of the publication of Albert Einstein’s landmark physics papers.

Community leaders will be welcomed in the

Bldg. 123 auditorium by Wayne Shotts, deputy director for Operations, and hear comments from Jerald Paul, principal deputy administrator of the National Nuclear Security Administration, and Adm. Robert Foley, University of California vice president for Laboratory Management.

Bill Goldstein, associate director for Physics and Advanced Technologies, will discuss the significance of the Year of Physics. Mayor Marshall Kamena is also scheduled to read a special proclamation from the City of Livermore.

Albert Einstein, in the person of Lab employee Evan Rittmann, also will make an appearance.

After the presentations, community leaders will be taken on tours of the National Ignition Facility, the Terascale Simulation Facility or the Center for Accelerator Mass Spectrometry.



On the beam



FRANK NUNEZ/TID

From left: Meggen Watt, senior adviser on National Security Matters, Office of the Secretary of Energy; Bruce Warner, deputy associate director for NIF Programs; Lab Executive Officer Ron Cochran, and Michael Sohn, National Nuclear Security Administration’s Laboratory Site Operations Office, examine the target chamber during a tour of NIF last week. Watt was given an overview of Lab national security programs and a tour of research facilities.

Newsline
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